

U.S.S.N. 10/792,302

Filed: March 3, 2004

AMENDMENT AND RESPONSE TO OFFICE ACTION

In the Claims

1. (currently amended) A method for isolating a pluripotent or multipotent spore-like cell population from a mammalian biological tissue or cell containing fluid, the method comprising (a) obtaining a mammalian tissue or cell containing fluid and exposing ~~it~~ the mammalian tissue or cell containing fluid to an environment in which differentiated or partially differentiated cells in the tissue or fluid die, wherein the environment includes one or more conditions selected from the group consisting of temperature of 42°C or greater, freezing, non-physiological salt concentration, essential absence of oxygen for at least four hours, size separation and passaging in cell culture, treatment with acid or base, radiation and drying, and (b) separating the population of viable spore-like cells from the dead differentiated or partially differentiated cells.
2. (previously presented) The method of claim 1, further comprising disrupting the tissue or fluid either before or after step (a) and separating the viable spore-like cell from the dead differentiated or partially differentiated cells by size separation.
3. (currently amended) The method of claim 1 wherein the spore-like cell population fails to demonstrate activity in a microtetrazolium assay.
4. (previously presented) The method of claim 1 wherein the spore-like cells contain between approximately 50 and 90% by volume nuclear material.
5. (previously presented) The method of claim 1 wherein the spore-like cells have a diameter of approximately 15 microns or less.
6. (previously presented) The method of claim 1 ~~3~~, wherein the spore-like cells have a

U.S.S.N. 10/792,302
Filed: March 3, 2004
AMENDMENT AND RESPONSE TO OFFICE ACTION

diameter of between 0.1 and 3.0 microns.

7. (previously presented) The method of claim 1 wherein the tissue or fluid is treated with salt, acid or base and the spore-like cells isolated.

8. (original) The method of claim 1, wherein the biological tissue comprises a tissue that originates from the endoderm.

9. (original) The method of claim 1, wherein the biological tissue comprises a tissue that originates from the mesoderm.

10. (original) The method of claim 1, wherein the biological tissue comprises a tissue that originates from the ectoderm.

11. (original) The method of claim 1, wherein the biological fluid comprises blood, urine, or saliva.

12. (original) The method of claim 1, wherein the biological fluid is cerebrospinal fluid.

13. (original) The method of claim 1, wherein the environment is an oxygen-poor environment.

14. (original) The method of claim 1, wherein the environment is one in which the temperature is above or below the range of temperatures in which differentiated or partially differentiated cells can survive.

15. (original) The method of claim 1, wherein the environment contains a toxin or infectious agent that kills differentiated or partially differentiated cells.

16. (previously presented) A The method of claim 1 wherein the environment contains radiation or is dessicating.

17. (currently amended) The method of claim 1 further comprising placing the cells cell population into a matrix for implantation into a site for tissue repair, augmentation or

U.S.S.N. 10/792,302
Filed: March 3, 2004
AMENDMENT AND RESPONSE TO OFFICE ACTION

regeneration.

18. (previously presented) The method of claim 17, further comprising implanting the matrix into a site for tissue repair, augmentation or regeneration.

19. (currently amended) The method of claim 1 further comprising culturing the spore-like ~~cells~~ cell population.

20. (previously presented) The method of claim 18 further comprising implanting the matrix into a tissue selected from the group consisting of the visual system, auditory system, nasal epithelium, alimentary canal, pancreas, gallbladder, bladder, kidney, liver, heart, respiratory system, nervous system, reproductive system, endocrine system, immune system, bone, muscle, tooth, nail, and skin.

21. (previously presented) The method of claim 17 wherein the matrix is a hydrogel.

22. (currently amended) The method of claim 1 wherein the tissue is ~~obtained from a tissue~~ selected from the group consisting of cardiac, smooth and skeletal muscle, intestine, bladder, kidney, liver, lung, adrenal gland, skin, retina, nasal epithelium, brain, spinal cord, periosteum, perichondrium, fascia, and pancreas.

23. (currently amended) The method of claim 1 wherein the spore-like ~~cells are~~ cell population is frozen after isolation.

24. (currently amended) The method of claim 1 further comprising inducing the isolated spore-like cells in the population to differentiate.

25. (currently amended) The method of claim 21 wherein the spore-like cells in the population are introduced into a support structure.

26. (previously presented) The method of claim 17 wherein the matrix is a porous polymer mesh, suture, film or sponge.

U.S.S.N. 10/792,302

Filed: March 3, 2004

AMENDMENT AND RESPONSE TO OFFICE ACTION

27. (previously presented) The method of claim 1 ~~16~~, wherein the biological fluid is cerebrospinal fluid.

28. (cancelled) The method of claim 16, wherein the environment is 0°C. or less and the protective agent is a cryopreservative.

29. (cancelled) The method of claim 16, wherein the tissue or fluid is intentionally exposed to the environment.